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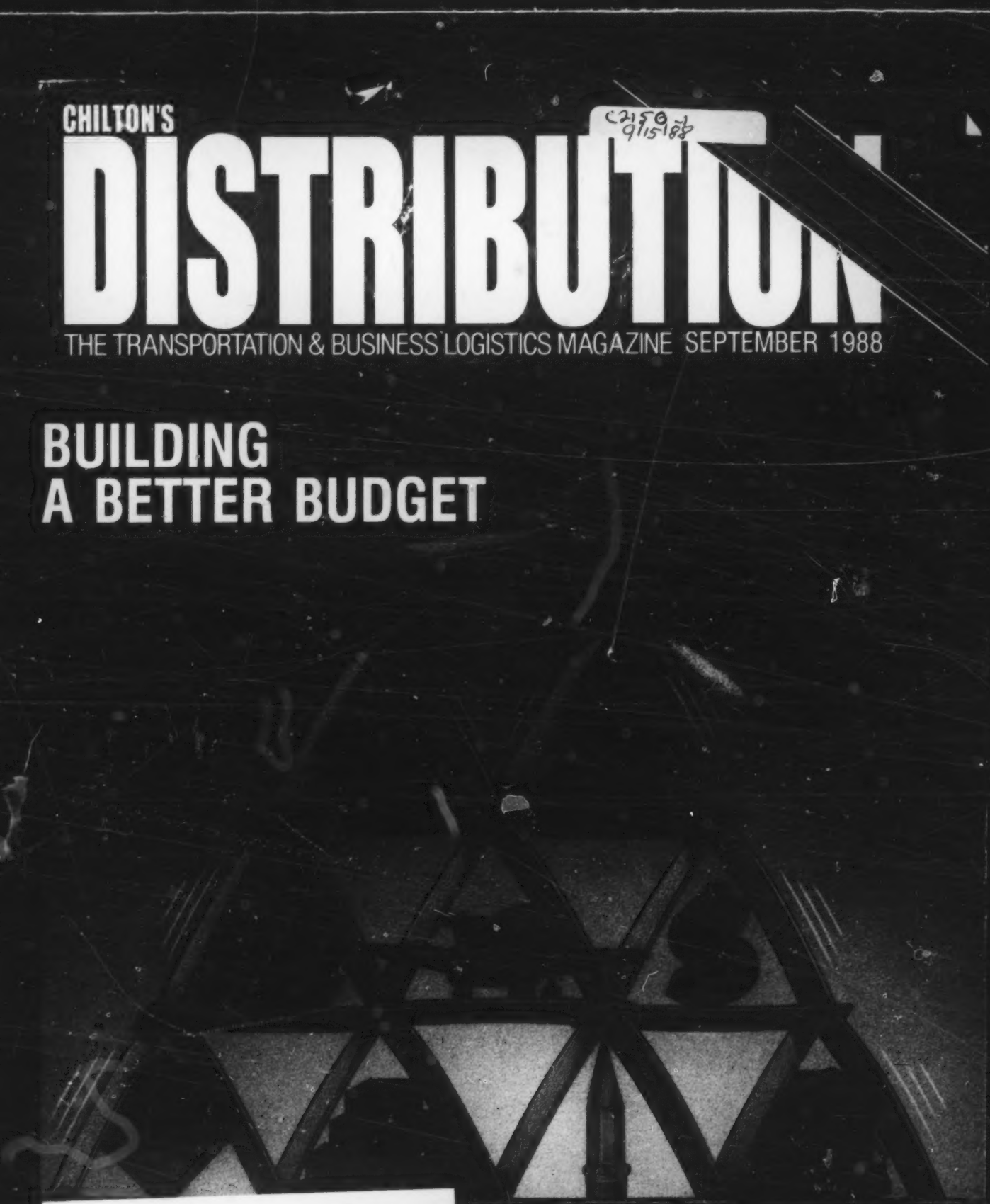
THE TRANSPORTATION & BUSINESS LOGISTICS MAGAZINE SEPTEMBER 1988

BUILDING A BETTER BUDGET



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GETTING A GRIP ON LTL

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SEPTEMBER, 1988

CHILTON'S
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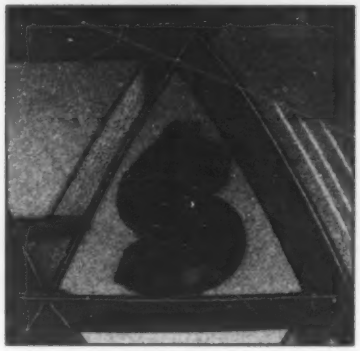
THE TRANSPORTATION & BUSINESS LOGISTICS MAGAZINE

VOL. 87, NO. 9

COVER STORY

30 HOW TO BUILD A BETTER BUDGET

The budget is the most critical financial and operational plan a company has. It is also one of the few ways that the successes and failures of transportation and distribution are recognized by upper management. Yet the majority of managers with T&D responsibility dread the budgeting process because it can be so unsatisfying.



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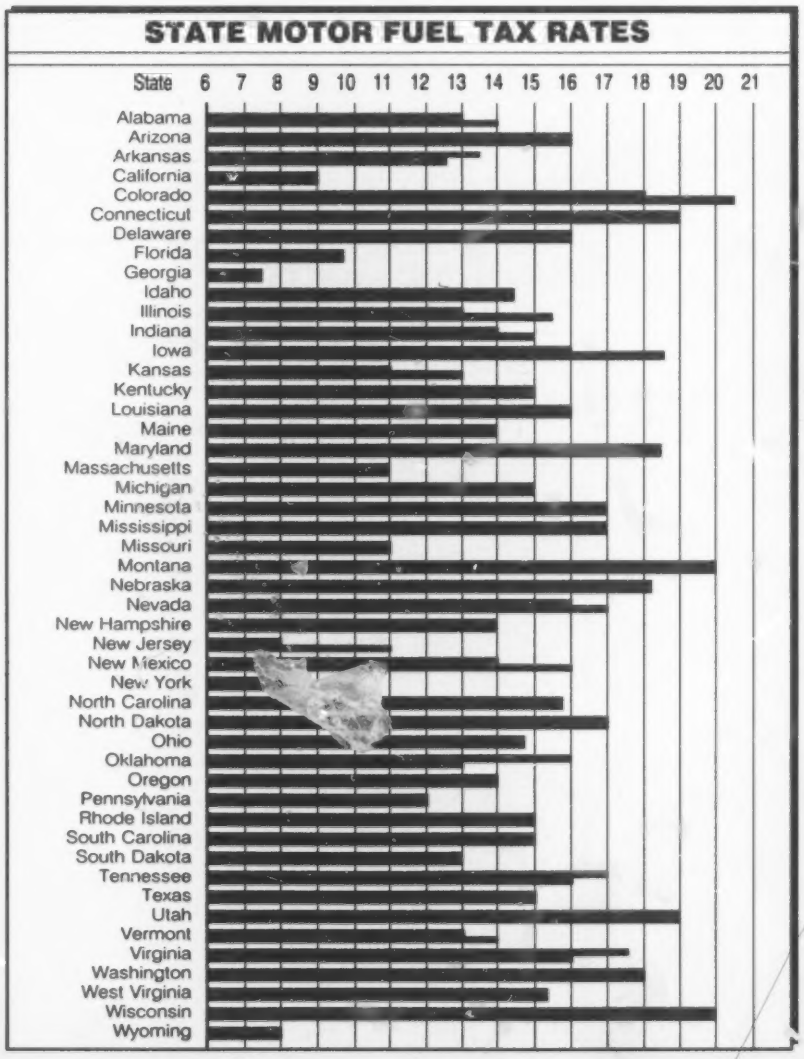
DISTRIBUTION's 1988 SITE LOCATION INDEX

Where's the best place to locate a new plant or distribution center? This handy guide should get your search moving in the right direction.



The information presented in this feature was gleaned from a number of sources. Because it was impossible to convey, in these charts, the full extent of the details provided by these documents, it is recommended that the reader consult these primary sources where appropriate.

One of the most useful tools for evaluating the states is the "General Manufacturing Climates" study. Conducted annually by Grant Thornton, an accounting and management consulting firm, it rates the states according to 22 economic factors. Contact Grant Thornton, 1700 Prudential Plaza, Chicago, Ill. 60601.

Data on motor fuel taxation is available from the Highway Users Federation, 1776 Massachusetts Ave., N.W., Washington, D.C. 20036-1993.

Information on highway regulations, taxes, and reciprocity agreements is also available from the National Private Trucking Association (formerly the Private Carrier Conference), 2200 Mill Rd., Alexandria, Va. 22314.

FUEL TAX RATES represents the taxes imposed on motor fuels in cents per gallon. The bars are doubled, the upper segment indicating the tax on gasoline, the lower segment the tax on diesel fuel. In many cases the two fuels are taxed at the same rate. In addition to the basic rates, many states also impose additional mileage taxes, surcharges, etc. In the past year, 14 states raised one or both of their motor fuel tax rates. Increases were proposed in 19 other states, but were not enacted. Source: Highway Users Federation.

Site Location Index

MOTOR VEHICLE SIZE, WEIGHT AND ACCESS RESTRICTIONS

	height			width		length: straight truck					length: tractor/trailer					weight				access						
	13'6"	14'	14'6"	96"	102"	35'	40'	45'	60'	see notes	60'	65'	70'	see notes	not specified	73,000 – 79,999 lbs	80,000 lbs	over 80,000	see notes	.5 miles	1 mile	3 miles	5 miles	10 miles	unlimited	see notes
Alabama	●			●			●				●						●								●	
Arizona	●			●			●								●		●				●				●	
Arkansas	●				●		●				●						●								●	
California		●			●		●					●					●			●						
Colorado	●				●		●						●				●									
Connecticut	●				●			●							●		●				●				●	
Delaware	●			●			●				●						●									a
Florida	●			●		●									●		●									b
Georgia	●			●				●			●						●				●					
Idaho		●			●		●								●		●								●	
Illinois	●			●						a				e		●							●			
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Iowa	●			●			●				●						●									
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Louisiana	●			●			●								●		●					●				
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Maryland	●			●			●								●	●										d
Massachusetts	●			●		●					●						●									e
Michigan	●			●			●							f		●							●			
Minnesota	●				●		●					●				●										f
Mississippi	●				●		●								●		●								●	
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Montana		●			●		●								●		●								●	
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Nevada		●			●		●						●			●									●	
New Hampshire	●				●	●									●		●									g
New Jersey	●			●		●									●		●									h
New Mexico	●				●		●					●					●									i
New York	●			●		●					●						●									j
North Carolina	●			●		●					●						●					●				
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Ohio	●				●		●								●		●								●	
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South Carolina	●			●		●					●						●								●	
South Dakota	●				●			●							●			●							●	
Tennessee	●			●			●							j			●								●	
Texas	●				●			●						k			●								●	
Utah		●			●			●						l			●								●	
Vermont	●			●			●				●						●									o
Virginia	●				●		●				●						●			●						
Washington		●			●		●								●										●	
West Virginia	●			●			●				●					●										p
Wisconsin	●				●		●				●						●									
Wyoming			●		●				●		●							●					●		●	

MOTOR VEHICLE RESTRICTIONS outlines the size and width limitations observed by the various states. The limits described are those imposed on vehicles travelling on state and non-designated highways. Limits governing vehicles travelling on the insterstate system are governed by the provisions of the Surface Transportation Assistance Act. Also included in the chart are the restrictions limiting access to the designated interstate highway system. The limitations listed under the "length" heading are those for a 2-axle straight truck, and for 3-axle tractor, 2-axle trailer combinations. The limits listed are those in general application. Several exceptions or additional restrictions may be applied in some cases.

Notes, vehicle sizes and weights:

a – maximum length = 42 ft.
b – maximum lentgh = 36 ft.
c – maximum length = 42 ft., 6 in.
d – maximum length = 50 ft.
e – maximum 55 ft. wheelbase
f – maximum length = 59 ft.
g – maximum length = 53 ft.
h – maximum length = 75 ft.
i = maximum length = 53 ft.
j = maximum length = 48 ft.
k = maximum length = 57 ft.
l = maximum length = 48 ft.
m = 95,000 lb. w/ 7 alxes and permit

Notes, interstate system access provisions:

a – By permit only
b – Rural interchanges 1 mi. (2 lane) and 3 mi. (4 lane); urban interchanges 1 mi on crossroads with 12-ft. lanes. Other access by petition
c – Rural interchanges 2 mi., urban interchanges .5 mi.
d – Shortest practical route
e – By permit only
f – To facilities or for route continuance
g – By permit only for twins
h – By permit only for twins
i – 20 mi.
j – Permit required beyond 1,500 ft.
k – "very reasonable" access
l – All but local roads, twins not restricted
m – .2 mi.
n – Doubles restricted to 1 urban mi.,1 mi. on 2-lane roads, 3 mi. on 4-lane roads in rural areas
o – Unpermitted twins: .5 mi for access to food, fuel, lodging, terminals
p – 2 mi.

Site Location Index

LABOR ENVIRONMENTS—AVERAGE WAGES

State	Avg. Wage/hr.	% Change	State	Avg. Wage/hr.	% Change
Alabama	$ 8.76	19.51	Nebraska	$ 9.34	10.27
Arizona	9.94	13.86	Nevada	9.76	10.91
Arkansas	7.88	17.79	New Hampshire	9.28	33.72
California	10.77	16.56	New Jersey	10.42	20.32
Colorado	10.11	17.15	New Mexico	8.74	21.05
Connecticut	10.46	27.10	New York	10.09	20.84
Delaware	10.69	23.73	North Carolina	7.83	23.31
Florida	8.16	16.24	North Dakota	8.43	12.40
Georgia	8.51	26.07	Ohio	11.73	16.48
Idaho	9.70	12.53	Oklahoma	10.14	16.69
Illinois	10.85	16.54	Oregon	10.55	5.29
Indiana	11.06	12.97	Pennsylvania	9.98	15.64
Iowa	10.61	5.99	Rhode Island	8.19	23.90
Kansas	9.97	13.30	South Carolina	8.10	21.26
Kentucky	10.04	19.81	South Dakota	7.94	7.88
Louisiana	10.90	16.20	Tennessee	8.78	22.63
Maine	8.77	21.47	Texas	9.85	14.53
Maryland	10.08	14.81	Utah	9.95	18.45
Massachusetts	9.77	28.89	Vermont	9.12	24.08
Michigan	12.97	16.01	Virginia	9.15	24.15
Minnesota	10.37	13.83	Washington	11.70	4.19
Mississippi	7.59	18.41	West Virginia	10.56	12.34
Missouri	9.99	18.09	Wisconsin	10.55	12.59
Montana	10.61	7.61	Wyoming	9.78	13.46

AVERAGE WAGES represents the average hourly wage paid to manufacturing workers. The column labeled "% change" indicates the trend in the average manufacturing wage over the last five years. As was the case last year, the lowest average wage is paid in Mississippi, and the highest in Michigan. The increase in wages over the five-year period has averaged about 17 percent. New Hampshire, however, has led the nation with increases amounting to over 33 percent. The most favorable wage climate is in the Southeast. At the same time, however, wages in the Southeast are rising faster than most areas of the country. Only in New England, the region ranking second in average wages paid, were wages increasing at a faster rate. Source: General Manufacturing Climates, Grant Thornton.

LABOR ENVIRONMENTS—UNIONIZATION

State	Union Workforce	% Change	State	Union Workforce	% Change
Alabama	16.66%	-10.74	Nebraska	10.60%	-13.61
Arizona	4.10	-4.88	Nevada	6.84	-9.55
Arkansas	12.97	-13.67	New Hampshire	7.25	-5.19
California	23.75	-6.57	New Jersey	24.65	-2.64
Colorado	10.68	-2.68	New Mexico	10.82	-19.07
Connecticut	15.58	-2.96	New York	50.27	-12.89
Delaware	20.72	8.85	North Carolina	4.89	0.65
Florida	9.05	-0.22	North Dakota	11.46	-22.54
Georgia	12.45	-5.84	Ohio	42.07	-12.98
Idaho	9.28	-22.50	Oklahoma	17.14	-1.81
Illinois	34.18	-41.71	Oregon	23.01	-9.88
Indiana	41.28	-0.20	Pennsylvania	41.86	-8.53
Iowa	23.10	-37.92	Rhode Island	11.01	-2.88
Kansas	11.81	-8.62	South Carolina	3.59	-1.62
Kentucky	24.76	-16.24	South Dakota	3.10	-8.50
Louisiana	20.84	8.66	Tennessee	13.98	-10.85
Maine	19.79	3.07	Texas	15.03	1.78
Maryland	30.27	-5.68	Utah	5.50	-8.64
Massachusetts	19.35	-4.68	Vermont	8.91	-5.90
Michigan	51.94	- 9.03	Virginia	12.50	4.27
Minnesota	19.28	-33.22	Washington	30.00	-27.05
Mississippi	8.84	-0.90	West Virginia	33.60	-6.27
Missouri	34.07	-47.28	Wisconsin	26.65	-27.00
Montana	23.83	-12.25	Wyoming	18.52	-8.17

UNIONIZATION indicates the degree to which the available workforce is unionized. This factor has a potential effect on the future cost of labor and on labor relations. The second column indicates the change in unionization as a percentage, over five years. The figures show that the decline in union membership characteristic of the past several years is continuing. In only eight states did union membership grow during 1987. In each case, the increase was modest, and only in Virginia was the increase indicative of a longer-term trend. In contrast, Missouri's union workforce has eroded by nearly 50 percent over five years. The Great Lakes region, where only Minnesota is excluded from the list of the 10 most unionized workforces, is the hotbed of unionization. Source: General Manufacturing Climates, Grant Thornton.

LABOR PRODUCTIVITY

State	Work Stoppages	Value Added/$	State	Work Stoppages	Value Added/$
Alabama	0.366%	$3.58	Nebraska	1.090%	4.62
Arizona	0.002	4.51	Nevada	0.000	4.51
Arkansas	0.000	3.66	New Hampshire	0.000	3.75
California	0.027	4.72	New Jersey	0.003	4.64
Colorado	0.000	4.62	New Mexico	0.000	4.31
Connecticut	0.034	4.46	New York	0.010	5.22
Delaware	0.000	4.41	North Carolina	0.000	4.45
Florida	0.003	4.71	North Dakota	0.000	4.86
Georgia	0.024	4.33	Ohio	0.123	3.77
Idaho	0.025	3.91	Oklahoma	0.000	4.23
Illinois	0.130	4.27	Oregon	0.139	3.69
Indiana	0.398	3.65	Pennsylvania	0.190	3.85
Iowa	1.073	4.94	Rhode Island	0.000	3.58
Kansas	0.000	4.97	South Carolina	0.000	3.54
Kentucky	0.000	4.62	South Dakota	2.868	4.77
Louisiana	0.003	4.74	Tennessee	0.124	3.97
Maine	0.428	3.38	Texas	0.031	4.87
Maryland	0.008	4.10	Utah	0.509	4.63
Massachusetts	0.055	4.77	Vermont	0.000	3.60
Michigan	0.021	3.06	Virginia	0.018	4.25
Minnesota	0.146	4.78	Washington	0.094	4.04
Mississippi	0.000	3.92	West Virginia	0.000	3.83
Missouri	0.003	4.16	Wisconsin	0.016	4.01
Montana	0.052	2.91	Wyoming	0.000	4.17

LABOR PRODUCTIVITY represents, in the first column, the percentage of working hours lost due to work stoppages. The second set of figures shows the average value added to manufacturing production for each dollar invested in payroll expenses. The range in both sets of figures is wide. Several states recorded no work stoppages within the scope of the survey (data was not collected for stoppages involving fewer than 1,000 workers). On the other hand, South Dakota reported over 2 percent of available time lost. The value of each added dollar of payroll ranged from $2.91 to $5.22, but while the figures among individual states varied greatly, the differences from region to region were less dramatic. Source: General Manufacturing Climates, Grant Thornton.

Site Location Index

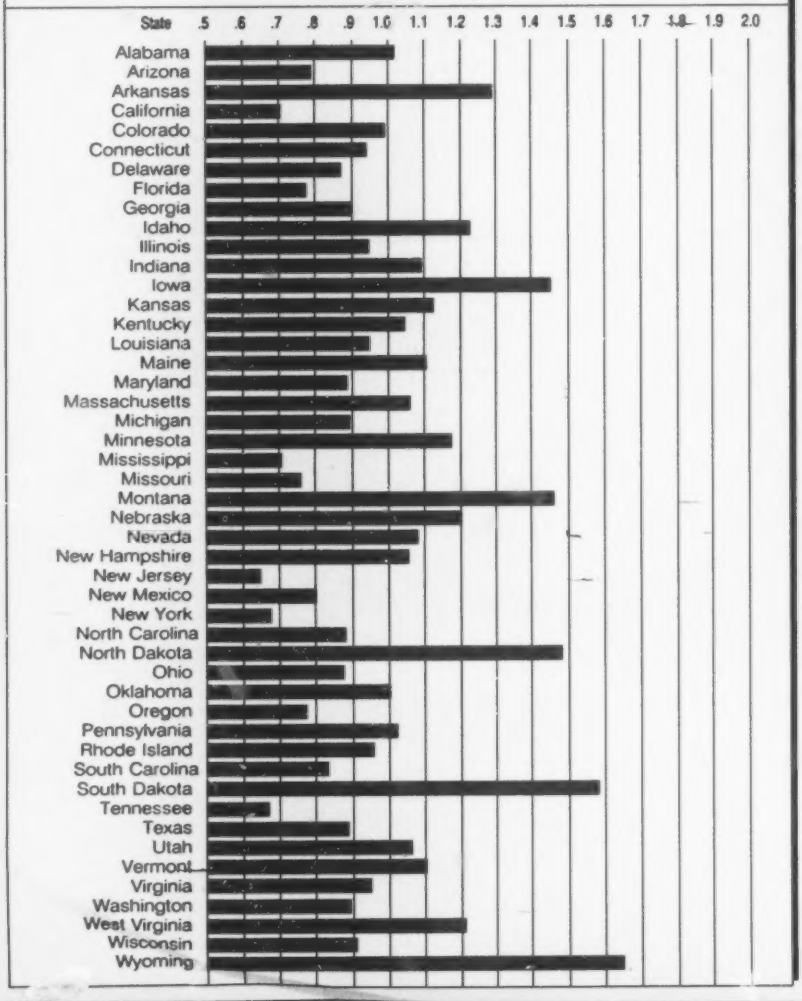
RECIPROCITY AGREEMENT PARTICIPATION

State	IRP	UPA	MRA	IFTA	RFTA	State	IRP	UPA	MRA	IFTA	RFTA
Alabama	yes	yes	no	no	no	Nebraska	yes	yes	no	no	no
Arizona	yes	yes	yes	yes	no	Nevada	no	no	yes	no	no
Arkansas	no	yes	no	no	no	New Hampshire	no	no	no	no	yes
California	yes	yes	no	no	no	New Jersey	no	no	yes	no	no
Colorado	yes	yes	yes	no	no	New Mexico	no	yes	no	no	no
Connecticut	yes	no	no	no	no	New York	no	no	no	no	no
Delaware	no	no	no	no	no	North Carolina	yes	no	yes	no	no
Florida	yes	no	yes	no	no	North Dakota	yes	yes	yes	no	no
Georgia	no	no	yes	no	no	Ohio	no	no	no	no	no
Idaho	yes	yes	no	yes	no	Oklahoma	yes	no	no	yes	no
Illinois	yes	yes	yes	no	no	Oregon	yes	yes	no	no	no
Indiana	yes	no	yes	no	no	Pennsylvania	yes	no	no	no	no
Iowa	yes	yes	no	yes	no	Rhode Island	no	no	no	no	no
Kansas	yes	yes	yes	yes	no	South Carolina	yes	yes	yes	no	no
Kentucky	yes	no	yes	no	no	South Dakota	no	yes	yes	no	no
Louisiana	yes	no	yes	no	no	Tennessee	yes	no	no	no	no
Maine	no	no	yes	no	no	Texas	yes	no	no	no	no
Maryland	yes	no	yes	no	no	Utah	yes	yes	no	no	no
Massachusetts	no	no	no	no	no	Vermont	yes	no	no	no	no
Michigan	yes	no	yes	no	no	Virginia	yes	no	no	no	no
Minnesota	yes	yes	no	yes	no	Washington	yes	yes	no	yes	no
Mississippi	yes	no	yes	no	no	West Virginia	yes	no	no	no	no
Missouri	yes	yes	yes	no	no	Wisconsin	yes	no	no	no	no
Montana	yes	yes	yes	no	no	Wyoming	yes	yes	no	no	no

RECIPROCITY AGREEMENT PARTICIPATION is a checklist of the major truck registration agreements:

- Multistate Reciprocal Agreement – a registration plate issued in the home state is honored by all participants. Fuel taxes are paid to each state on a per-mile basis;
- International Registration Plan – based on a single apportioned registration plate and a card carried inside the vehicle that lists other states it can operate in. Registration fees based on historical or forecast mileages;
- Uniform Proration Agreement – a home state license contains spaces for decals purchased from other states. Registration fees are based on actual mileages;
- International Fuel Tax Agreement & Regional Fuel Tax Agreement – base state issues license, decal, receives all fees and reports, and distributes payments to appropriate jurisdictions.

TRANSPORTATION NETWORK



TRANSPORTATION NETWORK is an index of each state's quality of transportation. The index is an overall rating based on such factors as the state's transportation budget, condition of roadways, per capita transportation expenditures, average daily traffic volumes, and a number of other commuter-related factors. A rating of 1.000 is defined as the national average. The higher the rating, the better the state's transportation network. Only three regions of the country averaged higher than the national average – New England, the North Central and South Central regions. The North Central region alone accounted for seven of the top ten ratings. Surprisingly Pennsylvania, which in a 1987 survey of interstate truckers was named the state least convenient to drive in, ranked above the national average in this study. The Mid East region as a whole is rated the nation's worst, however. New Jersey and New York received two of the three worst scores in the country, and only two states in the region topped a score of 1.000. Data are for the year 1987. Source: General Manufacturing Climates, Grant Thornton.

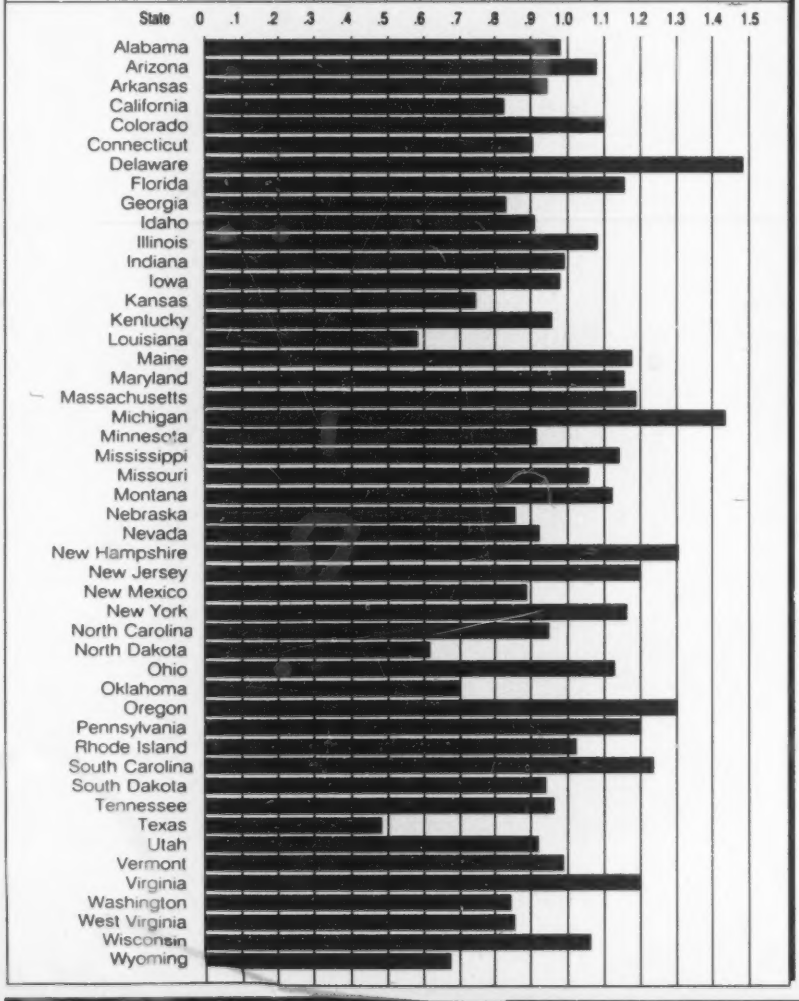
Site Location Index

STATE AND LOCAL TAX EFFORTS

State	Tax Effort	% Change	State	Tax Effort	% Change
Alabama	87.286	1.73%	Nebraska	93.248	-9.22%
Arizona	96.855	-18.31	Nevada	63.931	7.16
Arkansas	92.600	7.69	New Hampshire	64.635	-13.86
California	94.906	-8.35	New Jersey	104.636	-6.56
Colorado	85.573	-6.19	New Mexico	78.588	-0.88
Connecticut	98.940	-0.92	New York	156.009	-6.83
Delaware	79.592	-10.52	North Carolina	92.811	-4.29
Florida	75.457	3.39	North Dakota	82.293	7.97
Georgia	90.041	-6.53	Ohio	103.236	18.39
Idaho	90.554	2.30	Oklahoma	79.339	21.27
Illinois	107.120	3.84	Oregon	101.482	8.69
Indiana	96.057	13.48	Pennsylvania	103.195	-1.40
Iowa	111.940	16.85	Rhode Island	118.045	-4.14
Kansas	97.434	4.85	South Carolina	95.245	-0.30
Kentucky	83.918	-2.07	South Dakota	86.732	-1.77
Louisiana	89.570	22.87	Tennessee	82.017	-2.78
Maine	104.036	-6.40	Texas	74.282	20.57
Maryland	100.961	-7.13	Utah	111.944	7.65
Massachusetts	106.276	-21.02	Vermont	92.760	-11.02
Michigan	120.666	4.02	Virginia	86.919	-2.39
Minnesota	117.865	7.73	Washington	94.984	1.26
Mississippi	92.320	-4.14	West Virginia	104.115	31.40
Missouri	84.003	0.29	Wisconsin	127.542	9.60
Montana	98.879	15.58	Wyoming	102.611	26.43

STATE AND LOCAL TAX EFFORTS measures the degree to which states make use of their capacity to tax. The index is based on a comparison of a state's tax rates to a national average (defined as a rating of 95.905). A lower rating indicates a lower relative tax burden. The second column of the chart measures the change in the state's tax effort over the past five years. The national average change is an increase of 2.25 percent. The figures indicate the heaviest tax burden is borne by the Great Lakes region. The region's average tax effort (112.081) is the nation's highest. At the same time, every state in the region has shown five-year growth at a pace greater than the national average. The Mid Eastern region, bearing the second highest tax burden, is undergoing a moderation of tax rates in each of its six states. Source: General Manufacturing Climates, Grant Thornton.

STATE BUSINESS INCENTIVES



STATE BUSINESS INCENTIVES is an indication of each state's willingness to attract new business and expand current businesses through grants, early stage debt programs, inventory tax exemptions, etc. The index also considers such factors as changes in the unemployment rate over a five-year period and the rate of new business formation in the state. A rating of 1.000 represents the national average. The higher the rating, the better the state's business incentives. The ratings show an effort on the part of the nation's older industrial centers to draw businesses back from the sunbelt. The Mid Eastern, New England, and Great Lakes regions were the top three business suitors nationwide. Otherwise, only the Southeast rated above the national average. In the top three regions, 13 out of 18 states were given a rating above 1.000. (One state however, West Virginia, fell in among the ten worst performers nationwide.) In contrast, none of the four states in the South Central region topped the national average. Source: General Manufacturing Climates, Grant Thornton.

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ARE YOU GETTING YOUR PROPER REWARD?

New data on salaries, bonuses and benefits within the logistics profession reveal widely varying pay patterns from function to function, and industry to industry. Are there good reasons for the differences?

A Special DISTRIBUTION Report

Greg Weber heads materials management for a diversified food products manufacturer. He has been working in transportation and physical distribution for 11 years, and has been in his present position for two years. He manages a staff of 14 and is accountable for meeting specific inventory and finished-goods delivery targets. His department has an operating budget of $3 million and an annual freight bill of $25 million.

Last year, Weber was paid a base salary of $68,400 and earned a cash bonus of $13,700, as part of his company's performance incentive program. His company also provided him with a benefits package (including some combination of health, dental and life insurance, pension set-asides, capital accumulation contributions, and other fringes) worth a total of $28,500.

Lawrence Dornhoefer, distribution manager for a large manufactur-

continued

COMPENSATION—LOGISTICS FUNCTION*
(In thousands of dollars)

Position	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.	Wholesale/ Retail
Entry professional					
Base Salary	$28.5	28.9	31.6	30.7	28.6
Total Cash	28.6	28.9	31.7	30.8	28.6
Fully qualified professional					
Base Salary	46.4	45.2	49.9	43.4	42.6
Total Cash	46.9	46.2	50.4	44.8	45.8
Seasoned professional/ Middle management					
Base Salary	72.8	68.9	76.0	68.4	75.4
Total Cash	76.1	81.7	84.7	82.1	91.7
Advanced management					
Base Salary	101.9	–	107.6	110.4	–
Total Cash	116.9	–	131.4	146.0	–
Executive/Head of Function					
Base Salary	–	–	–	125.1	–
Total Cash	–	–	–	171.6	–

Source: Hay Management Consultants

** Includes inventory control, warehousing and distribution, transportation and traffic, materials management and purchasing positions. Total cash = salary + bonuses. Blanks indicate a lack of statistically significant data.*

COMPENSATION: TRAFFIC/TRANSPORTATION
(in thousands of dollars)

Position	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.	Wholesale/ Retail
Entry professional					
Base Salary	$28.9	28.5	32.3	31.5	31.5
Total Cash	29.2	28.9	32.5	31.7	31.9
Fully qualified professional					
Base Salary	46.3	46.4	48.6	47.2	46.3
Total Cash	46.3	46.9	49.0	47.9	46.8
Seasoned professional/ Middle management					
Base Salary	74.5	–	75.4	66.3	–
Total Cash	77.2	–	84.8	77.5	–

Source: Hay Management Consultants
Total cash = salary + bonuses. Blanks indicate a lack of statistically significant data.

COMPENSATION: WAREHOUSING/DISTRIBUTION
(in thousands of dollars)

Position	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.	Wholesale/ Retail
Entry professional					
Base Salary	$30.0	29.0	31.1	32.3	–
Total Cash	30.0	29.1	31.2	32.7	–
Fully qualified professional					
Base Salary	50.8	44.0	49.3	38.9	43.9
Total Cash	53.2	45.6	49.8	40.4	44.3
Seasoned professional/ Middle management					
Base Salary	81.5	68.1	82.4	65.4	–
Total Cash	83.4	82.1	89.6	76.3	–

Source: Hay Management Consultants
Total cash = salary + bonuses. Blanks indicate a lack of statistically significant data.

COMPENSATION: INVENTORY CONTROL
(in thousands of dollars)

Position	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.
Entry professional				
Base Salary	$29.1	28.3	32.2	29.9
Total Cash	29.1	28.4	32.4	30.2
Fully qualified professional				
Base Salary	47.8	43.3	47.8	47.5
Total Cash	48.1	44.1	48.9	49.1

Source: Hay Management Consultants
Total cash = salary + bonuses. Blanks indicate a lack of statistically significant data.

er of turbine engines, has a job, and work history, that are nearly identical to Greg Weber's. Dornhoefer's base pay is $72,800, 6.4 percent higher than Weber's. But his bonus last year was just $3,300. As a result, Dornhoefer's total cash compensation was $6,000, or 7.3 percent, lower than Weber's. Dornhoefer's benefits package was also of slightly less value ($27,500) than the one given to his food industry "counterpart."

Is Weber overpaid? Is Dornhoefer underpaid? Or is there justification, in both cases, for the discrepancy? What are the performance implications of the difference between the two managers' incentive pay? How do the reward packages for both of these professionals compare with those earned by incumbents of other logistics-related positions in their respective companies and industries, as well as in the logistics field at large? Most importantly, is there evidence of precision in the way pay levels in logistics are now being set? Or does it appear to be largely an arbitrary process?

Actual Profiles

Greg Weber and Lawrence Dornhoefer are fictitious names, but their job descriptions, as well as their salary, bonus and benefits figures are very real. They represent job profiles based on averages for people in their specific function and industry. Their profiles, and many others for logistics-related positions, were compiled by the Hay Group, a management consulting firm that maintains the U.S.'s largest database of job description and compensation information (see box, p. 66).

In addition to the specific findings reflected by the charts presented throughout this article, a number of general conclusions can be drawn from the Hay analysis of current pay trends in the logistics field.

Industry Differentials. Controlling for similarity of job size, heavy and light manufacturing companies tend to pay lower, by some 5 to 9 percent, than companies in the food

continued

INCENTIVES AS A PERCENT OF TOTAL CASH COMPENSATION

(Middle Management Positions)

Position	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.	Wholesale/ Retail
Materials Management	4.5%	14.7	8.9	15.0	14.0
Purchasing/Contracting	4.3	18.2	11.4	17.7	21.0
Warehousing/Distribution	2.3	17.1	8.0	14.3	–
Traffic/Transportation	–	–	3.3	–	22.0

Source: Hay Management Consultants

Incentives may be greater for purchasing because it has more direct contact with outside vendors. Blanks indicate a lack of statistically significant data.

and tobacco or chemical/pharmaceutical sectors. When the value of benefits is added to the comparison, the gap doubles; first, because many benefits are determined as a percentage of salary, and second, because benefit plan provisions are somewhat more generous in the higher-paying sectors.

This trend is in direct contrast with patterns that emerge when compensation for other functions, such as production, engineering, or other line positions are compared across industry lines. For those functions, the manufacturing sector has long been known for higher pay levels. Perhaps the reversal where logistics is concerned can be attributed to a higher visibility and complexity of the function in the food and chemical sectors – both the greater risk

continued

FINDING YOUR LEVEL

The Hay Group/DISTRIBUTION study of compensation and benefit practices in the logistics profession divided positions into five job levels, according to the definitions below.

Caution: In a profession known for proliferation and broad overlap of titles, the "typical titles" provided for each definition may not be analogous with those used in your organization. Definitions above the second level must be examined carefully, as job content will vary dramatically according to the way a particular organization defines a logistics department's size, complexity and importance.

Entry Professional – Typically filled by incumbents with a college degree or equivalent and less than one year of work experience. Assignments are usually designed to provide exposure to the organization and/or the function, are relatively short-term, and are reviewed frequently for progress against end results. In the logistics field, typical entry-level titles include: buyer; inventory control analyst; expeditor; rate analyst; shipping clerk; traffic coordinator/administrator.

Fully Qualified Professional – At this level, incumbents are expected to be able to handle 80 to 90 percent of work assignments without close supervision or direction. Incumbents routinely try to solve problems by applying theories and policies of the discipline. Judgments are supported by the equivalent of a college degree and three to five years of relevant work experience. In the logistics field, typical fully qualified professional titles include: inventory control specialist; customer service manager; traffic/transportation manager.

Seasoned Professional/Middle Management – Incumbents at this level are highly seasoned professionals, resulting from the equivalent of a college degree and seven-plus years of relevant experience in the discipline. Incumbents are given broad direction on large projects, and are often called upon to discuss and implement creative solutions to non-standard problems. The upper end of this level also includes first- or second-level managerial positions accountable for achieving results through a subordinate staff. In the logistics field, typical seasoned professional/middle management titles include: warehouse/DC manager; superintendent of inventory control; purchasing manager; materials manager; fleet manager; distribution manager.

Advanced Management – Typically, this level includes the head of a major functional area or discipline, who is accountable for integrating several areas of technical knowledge/endeavor, and achieving results through subordinate staff. In the logistics field, typical advanced management titles include: director of transportation/distribution; director of warehouse operations; procurement director; director of fleet operations; director of logistics.

Executive/Head of Function – Top-level position with direct access to corporate management and multi-functional responsibilities. In logistics, typical executive titles include: executive vice president-logistics; vice president, transportation; vice president, materials management.

and perishability tied to the goods being moved, and the higher percentage of cost of sales represented by the function in those industries.

Wide Swings in Top Pay. Jobs in the top three levels of the logistics function (see definitions in the box on p. 54) are paid from an average of $76,100 total cash in light manufacturing companies to over $171,000 total cash in food and tobacco companies. At the advanced management level alone, the difference ranges from $116,900 in heavy manufacturing to nearly $146,000 in food and tobacco firms.

Three major reasons account for the gap:

- varying emphasis placed on the "criticality" of the logistics function by different industry sectors;
- varying definitions of job size (accountabilities, number of persons managed, etc.);
- widely varying use of incentives as a percentage of total cash compensation (see table, p. 54).

Favorite Subfunctions. The five industry sectors studied showed distinct pay preferences at the "fully qualified professional" level among the three subfunctions of the logistics function. Heavy manufacturing and chemical/pharmaceutical companies paid highest (total cash compensation) in the warehousing/distribution subfunction, but light manufacturing and wholesale/retail companies favored the shipping/transportation subfunction. Only food and tobacco companies among the five sectors paid highest in the inventory control subfunction, perhaps because these industries are more inventory-sensitive than the others.

Purchasing Incentives. For all industry sectors except heavy manufacturing, where incentive payouts are strikingly lower for all positions and job levels, incentive payouts are significantly greater at the middle management level for purchasing and contracting positions than for materials management positions. For example, in the wholesale/retail sector, incentives as a percent of total cash compensation are 21.0 percent for purchasing positions, and 14.0 percent for materials management positions. The difference may be attributable to the fact that purchasing has more direct contact with outside vendors, and thus has more incentive to produce savings that are clearly discernible on the bottom line.

Refining the Process

What can the Hay data tell us about the current job market in the logistics field, and about the effectiveness of the pay plans that are currently in use? More than anything else, the numbers highlight the importance of bringing greater precision to reward management for distribution positions.

The pay and benefits discrepancies between logistics functions and subfunctions (materials management vs. purchasing, warehousing vs. inventory control, etc.), and from industry to industry, reflect the exis-

continued

ADDED BENEFITS

Like all professionals who have had to learn to cope with smaller and less frequent base salary increases, logistics managers have become more conscious of the value of benefits packages as a key component of their total compensation. But the initial analysis of benefits for the logistics positions in the Hay database revealed that, here too, there may be significant discrepancies from industry to industry.

As the table below illustrates, among the five industry sectors studied, only companies in the chemical/pharmaceutical/petroleum sector provide above-average benefits at all salary levels for logistics positions. Benefits are lowest in the wholesale/retail sector.

Overall, the averages for logistics professionals represent slight improvements over those for all positions in industrial companies. The logistics average of $28,500 at the $70,000 salary level is over $500 greater than the overall average, and the logistics average of $38,000 at the $100,000 salary level is nearly $1,400 greater than the industrial norm.

At the $70,000 salary level for all positions in industrial companies, according to the 1987 Hay/Huggins Benefit Report, the breakdown of employer-paid values by benefit area is as follows:

Statutory – 5.0% of salary
Capital Accumulation – 6.4%
Health Care – 5.2%
Group Life – 2.1%
Holidays/Vacations – 10.9%
Pension – 6.5%
Disability – 3.9%
Total – 40.0% of salary

VALUE OF BENEFITS PROVIDED TO LOGISTICS PROFESSIONALS

Salary Level	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.	Wholesale/ Retail
$40,000 Salary					
Benefits ($000)	18.3	17.8	18.9	18.5	17.6
% of Salary	45.1	44.4	47.4	46.2	43.9
$70,000 Salary					
Benefits ($000)	27.8	27.1	28.9	28.4	26.9
% of Salary	39.8	38.7	41.4	40.6	38.5
$100,000 Salary					
Benefits ($000)	36.7	36.8	39.2	38.8	35.3
% of Salary	36.7	36.8	39.2	38.8	35.3

Source: Hay Management Consultants

tence of a fluid pay market. When a pay market is not stagnant, compensation levels can be used to position a company as a high-cost or low-cost producer, and thus have a greater impact on an organization's competitive stature and bottom-line performance. A fluid pay market also increases the potential for attracting top talent from the competition – or for losing your own best people.

For all of these reasons, the Hay data reflects a need for companies to assess their current methods of setting pay and benefits levels for logistics-related positions. Specifically, top management must determine if current compensation practices for logistics positions are sufficient to 1) clearly convey within the corporation the relative importance of the logistics function *vis a vis* other internal functions; 2) attract, retain, and motivate logistics professionals who can meet key strategic objectives; and 3) guard against the loss of key logistics personnel to competitors or other businesses.

Questions that need to be answered during this assessment process include:

- Where should logistics fit into our internal pay structure? Should we be paying our logistics people less, as much as, or more than other functions such as marketing, production, sales, research, etc.?
- What is the current risk of turnover within our logistics function? What would be the cost of replacing our current staff?
- Where are we now, and where do we want to be, in comparison with external pay markets for the logistics function? Are our competitors paying less, or more, for comparable managers? Is our pay practice for logistics in line with our overall strategy to be a high-, average-, or low-cost player in our market?

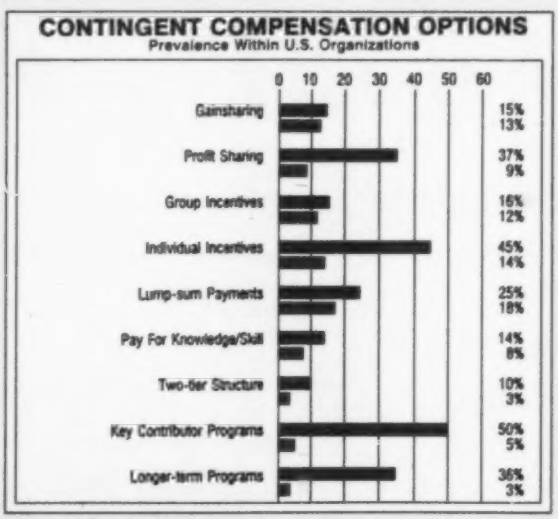
The onus for bringing these critical questions to the attention of top management is squarely on logistics professionals themselves. At first there is likely to be misunderstanding and/or apprehension on management's part, because of the ill-defined nature and roles of many logistics positions. But these fears can be assuaged through the use of tools such as formal job analysis and job measurement methodologies that

continued

CONTINGENT COMPENSATION: THE PERFORMANCE LINK

The DISTRIBUTION/Hay study indicates greater use of incentives within the logistics function, mirroring a larger trend for all professional positions in U.S. corporations. Within recent years, "contingent compensation" has emerged as a reward management technique that can help forge the link between cost-effective pay levels and peak employee performance.

The many forms of contingent compensation now in use include:



Source: Hay Management Consultants

Gainsharing – Unit-wide bonus systems designed to create, measure, and share improvements in productivity that would not otherwise have occurred. Most effective in environments where quantitative levels of production are important measures of business success. Within logistics, these plans would be most clearly applicable at a distribution facility where clear customer service or inventory reduction targets have been identified.

Profit Sharing – Like gainsharing, profit sharing is a productivity improvement technique and is most appropriate in situations where collective teamwork is required to produce results. Within logistics, profit sharing would be most easily applied in separate distribution or fleet subsidiaries that have been given a distinct set of business directives and profit/loss accountabilities.

Group Incentives – Similar to gainsharing plans, except that bonuses are based on the performance of a small group, rather than that of a larger unit. Within logistics, group incentives could be applied to improve performance within a specific subfunction, such as transportation, inventory control, customer service, or purchasing.

Individual Incentives – Ties all or part of an employee's pay to his/her own performance. Typically used in environments where individual output is quantifiable. The key to applying individual incentives

continued

can take the guesswork out of the process. The rankings yielded by these methodologies can pinpoint precisely where logistics positions stack up against other jobs within the organizations, which have been evaluated in the same fashion.

The rankings can then be used to compare compensation for logistics positions against those in external organizations. Shaping these comparisons around a process that takes a precise measure of a job's content, requirements, and responsibilities, and does not just compare similar titles, eliminates the apples-and-oranges problem that is particularly acute in the logistics field, where titles can be very misleading.

A second noteworthy trend revealed by the Hay data is the increasing use of cash incentives as a component of a logistics manager's total cash compensation. These incentives do not show up to any degree until the middle management level; but at that point, as we have already seen, they have begun to comprise significant portions (in some cases more

continued

Contingent Compensation, continued

within the logistics function is tying them to tangible performance measures: freight bill reduction, on-time deliveries, warehouse space utilization, etc.

Lump-sum Payments—One-time payments or bonuses given to eligible employees in lieu of all or part of a base salary increase. The payment is usually given for performance above a fully acceptable level, and does not become part of the base salary. This can be an effective method of maintaining motivational levels and rewarding top performance without increasing fixed costs.

Pay for Knowledge/Skill—Determines pay according to the number of jobs an employee can do, or by the level of skill used at a particular point in time. Works well in environments that are organized around work teams instead of individual job classifications, and in matrix organizations where the emphasis is on overall results and on roles played. In logistics, this could be an effective technique for getting around the "poor cousin" image of the function, by highlighting the versatility and cross-functional contributions of many of the professionals in the field.

Two-tier Structures—Brings new hires into an organization at a rate of pay that can be as much as 50 percent lower than that given to employees hired previously for similar jobs. Many two-tier plans grow out of sizable wage increases and cost-of-living adjustments that ultimately are negotiated into collective bargaining agreements.

Key Contributor Programs—Designed for individuals or teams whose skills, abilities, or contributions have made a significant impact on a company's products, services or processes. "Significant impact" should entail nothing short of increased profitability, demonstrated improvement in competitive advantage or measurable productivity gains. When a logistics-related objective is part of a major strategic initiative for an organization, such as the opening of a DC to expand into a new geographic market, or the introduction of MRP to cut inventory, those with logistics accountabilities should be made part of the key contributor incentive programs.

Longer-term Programs—Designed to reward key employees, primarily executives, for corporate or unit performance measured over a period of more than one year. These programs are grouped into four major categories: stock options, restricted stock, performance units/shares, and phantom stock.

The bar chart on p. 60 shows that key contributor programs are most prevalent among the contingent compensation options currently in use by 425 surveyed organizations. But those organizations indicate they plan to give extensive future consideration to other options also, especially lump-sum payments, gainsharing and group incentives. As the table at the left shows, the surveyed organizations reported that group incentives have demonstrated the most direct impact on improved performance to date, followed by longer-term programs and gainsharing.

CONTINGENT COMPENSATION: EFFECT ON BUSINESS PERFORMANCE
(% responding)

Compensation Program	Better	About the Same	Worse
Gainsharing	55	39	6
Profit Sharing	46	42	12
Group Incentives	67	25	8
Individual Incentives	50	41	9
Lump-sum Payments	39	51	10
Pay for Knowledge/Skill	39	48	13
Two-tier Structure	44	50	6
Key Contributor Programs	38	57	5
Longer-term Programs	58	30	12

Source: Hay Management Consultants

than one-fifth) of a job holder's total pay. The wholesale/retail and food and tobacco sectors, in particular, seem to now be leaning heavily toward increased leverage of logistics through incentives, perhaps, again, because of the direct impact logistics has been shown to have on sales, market penetration, and cost control in those industries.

The trend toward incentives, and the discrepancies revealed through closer analysis of current incentive patterns, raise an additional set of questions that top management must address:

- Is our current approach to reward management effectively motivating incumbents and eliciting the performance we need to meet our overall business objectives? Do the incentives for logistics-related positions link properly with those created for "sister" functions such as manufacturing or quality control?
- Should we be increasing the percentage of performance-based incentives in our mix of total compensation for logistics? Should we be pushing incentives into lower level positions? Should some disciplines within the function, such as purchasing or transportation management, be leveraged more than others toward incentive pay?
- Do we have the right measures and standards in place to effectively institute incentives and gauge performance? How do we avoid establishing conflicting objectives, such as inventory reduction targets that create a need for expedited, and therefore more costly, transportation?
- Is our corporate culture, particularly the logistics function, ready to accept a greater role for contingent compensation techniques such as profit sharing, gainsharing, key contributor programs, or pay for knowledge/skill? Are some techniques better for us than others given our structure, market position and strategic objectives? Tools are available to help management do more than throw darts when addressing these important issues. Quantitative audits can diagnose the readiness of an organization for a shift to greater use of incentive-based pay techniques, and identify which techniques are most likely to achieve the desired results.

Other diagnostic approaches can be employed to ensure that the objectives and mechanics of whatever pay system is used are in synch with those of the business operation as a whole. For example, care must be taken to make sure that a logistics-oriented incentive, such as inventory reduction, does not hamstring a larger objective, such as timely response to added demand caused by sales peaks or special promotions.

With the proper management tools and reliable, comprehensive survey data, precision can be brought to the process of establishing equitable, effective reward levels for logistics-related functions. Valid comparisons between the Greg Webers and Lawrence Dornhoefers of the profession can be made, and organizations can be assured that their compensation dollars are earning maximum returns on their investment in logistics expertise. ■

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THE DISTRIBUTION/HAY STUDY

Ever since the need for a logistics specialist was first identified, there has been little rhyme or reason to the way that specialist's services have been valued or paid for. Attempts to measure and explain existing pay levels within the logistics function have only added to the confusion. The industry has remained sorely in need of a definitive study that can link reward management for logistics-related functions to broader issues of organization design, performance measurement, and competitive advantage.

To get the ball rolling, DISTRIBUTION turned to Hay Management Consultants, a unit of the Hay Group, a worldwide management consulting firm specializing in human resources issues. Hay Management maintains a database of salaries, total cash compensation, and benefits for 1.5 million jobs in 1,200 U.S. organizations.

From that database, Hay has extracted existing information about compensation and benefits for 20,000 logistics-related jobs in 500 organizations, reflecting pay patterns through May of 1988. The jobs include positions in traffic/transportation, distribution, warehousing, inventory control, materials management, and purchasing. This data was sufficient to produce the initial analysis that forms the basis of this article. The findings of this analysis will also be presented on October 12 at the Council of Logistics Management meeting in Boston.

Because this analysis identifies many areas where more data is needed, DISTRIBUTION and Hay now plan to conduct, on an annual basis, a more comprehensive survey of cash compensation and organization design for transportation, distribution and related functions. An additional study of "contingent compensation" practices (performance-related incentives) within the logistics discipline is also planned. Readers are invited to help shape the content and focus of these studies, and indicate their interest in participating, by completing the Dialogue questionnaire on pp. 7-8 of this issue.

Contributing research and analysis to this initial study were Tom Jacob, John Yurkutat, John Linton, Marsh Bates, and John Ciervo of Hay Management Consultants.